Herbicide Label Examples to Illustrate Language Protective of Water
August 16, 2013

1.) Atrazine

Atrazine is a Restricted Use Pesticide (RUP). RUPs are restricted to use by pesticide applicators that are specially trained and certified. Atrazine is an herbicide that is often used in forestry. Atrazine is listed on the Washington Toxics Coalition 2004 court order, but it was not included in the NMFS subsequent list of biological opinions of 37 active ingredients. Here is a link to a pesticide product label with atrazine as an active ingredient followed by the label's water protective language.
http://www.epa.gov/pesticides/chem_search/ppls/034704-00622-20120320.pdf

- Product must not be mixed or loaded within 50 feet of intermittent streams and rivers, natural or impounded lakes and reservoirs. Product must not be applied within 66 feet of points where field surface water runoff enters perennial or intermittent streams and rivers or within 200 feet of natural or impounded lakes and reservoirs. If this product is applied to highly erodible land, the 66 foot buffer or setback from runoff entry points must be planted to crop, or seeded with grass or other suitable crop.
- Product must not be mixed or loaded, or used within 50 feet of all wells, including abandoned wells, drainage wells, and sink holes. Operations that involve mixing, loading, rinsing, or washing of this product into or from pesticide handling or application equipment or containers within 50 feet of any well are prohibited, unless conducted on an impervious pad constructed to withstand the weight of the heaviest load that may be positioned on or moved across the pad. Such a pad shall be designed and maintained to contain any product spills or equipment leaks, container or equipment rinse or wash water, and rain water that may fall on the pad.
- This pesticide is toxic to aquatic invertebrates. Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not apply when weather conditions favor drift from treated areas. Runoff and drift from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water when disposing of equipment wash water.
- Aerial application is prohibited. Any use of this product in areas where use is prohibited is a violation of federal law. Before using this product, you must consult the Atrazine Watershed Information Center (AWIC) to determine whether the use of this product is prohibited in your watershed. AWIC can be accessed through www.atrazine-watershed.info, or 1-866-365-3014. If use of this product is prohibited in your watershed, you may return this product to your point of purchase or contact Loveland Products, Inc. for a refund.

2.) 2,4-D

2,4-D is an herbicide used to control many broadleaf weeds in forests, aquatic areas, and other types of areas. It is one of the herbicides listed in the 2004 Washington Toxics Coalition court order. NMFS's biological opinion resulted in a jeopardy finding for 28 of 28 species. Here is a link to a pesticide product label with 2,4-D as an active ingredient followed by the label's water protective language.
http://www.epa.gov/pesticides/chem_search/ppls/083520-00013-20110819.pdf

- This product is toxic to fish and aquatic invertebrates. For terrestrial uses: Do not apply directly to water, to areas where surface water is present, or to intertidal area below the mean high water mark. Drift or runoff may be hazardous to aquatic organisms in water adjacent to treated areas, and non-target plants. Do not contaminate water when disposing of equipment wash waters or rinsate.
- This chemical has properties and characteristics associated with chemicals detected in groundwater. The use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination. Application around a cistern or well may result in contamination of drinking water or groundwater.
- Fish breathe dissolved oxygen in the water and decaying weeds also use oxygen. For aquatic uses: When treating continuous, dense weed masses, it may be appropriate to treat only part of the infestation at a

time. For example, apply the product in lanes separated by untreated strips that can be treated after vegetation in treated lanes has disintegrated. During the growing season, weeds decompose in a 2 to 3 week period following treatment. Begin treatment along the shore and proceed outwards in bands to allow fish to move into untreated areas. Waters have limited and less dense weed infestations and may not require partial treatments.

3.) Pendimethalin

Pendimethalin is widely used in Oregon for grass and clover grown for seed and for alfalfa. It is also used on some forestry sites. It is one of the herbicides listed in the 2004 Washington Toxics Coalition court order. NMFS's Biological Opinion of pendimethalin resulted in a jeopardy finding for 10 of 28 species. Here is the link to one active label for a product containing the active ingredient Pendimethalin followed by the label's language specific to water body protection.

http://www.epa.gov/pesticides/chem_search/ppls/083222-00035-20111117.pdf

Environmental Hazards: This product is toxic to fish. DO NOT apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. Drift and runoff from treated areas may be hazardous to aquatic organisms in adjacent aquatic sites. DO NOT contaminate water when disposing of equipment washwater or rinsate.

Endangered Species Protection: If endangered plant species occur in proximity to the application site, the following mitigation measures are required:

- If applied by ground, leave an untreated buffer zone of 200 feet. The product must be applied using a low boom (20 inches above the ground) and ASAE fine to medium/coarse nozzles.
- If applied by air, leave an untreated buffer zone of 170 feet. Must use straight-stream nozzles (D-6 or larger); wind can be no more than 8 mph; and release height must be 15 feet or less.

To determine whether your county has an endangered species, consult the website:
http://www.epa.gov/espp/usa-map.htm

Endangered Species Bulletins may also be obtained from extension offices or state pesticide agencies. If the bulletin is not available for your specific area, check with the appropriate local state agency to determine if known populations of endangered species occur in the area to be treated.

4.) Trifluralin

Trifluralin is an herbicide used to control of annual grasses and broadleaf weeds. This herbicide is seldom used in forestry in Oregon. It is one of the herbicides listed in the 2004 Washington Toxics Coalition court order. NMFS's biological opinion resulted in a jeopardy finding for 16 of 28 species. Below is a link to an active trifluralin label followed by the label's water protective language.
http://www.epa.gov/pesticides/chem_search/ppls/002749-00542-20100216.pdf

- This pesticide is extremely toxic to freshwater, marine, and estuarine fish and aquatic invertebrates including shrimp and oyster. Do not apply in a manner which will directly expose canals, lakes, streams, ponds, marshes or estuaries to aerial drift. Do not contaminate water when disposing of equipment washwaters or rinsate. Do not apply directly to water or to areas where surface water is present or to intertidal areas below the mean high water mark.
- The pesticide must only be applied when the potential for drift to adjacent sensitive areas (e.g. residential areas, bodies of water, known habitat for threatened or endangered species, non-target crops) is minimal (e.g. when wind is blowing away from the sensitive areas).